

Open-Ended Questions (1<sup>st</sup> ~25<sup>th</sup>) (4 points for correct answer, no penalty point for wrong answer)

Logical Thinking

1. In year 2021, how many month(s) is / are there with the date 30<sup>th</sup>?

Pada tahun 2021, ada berapa bulan dengan banyak hari 30?

2. According to the pattern shown below, what is the number in the space provided?

3 、 8 、 13 、 18 、 23 、 \_\_\_ 、 ....

Berdasarkan pola di bawah ini, berapakah bilangan pada tempat yang tersedia?

3 、 8 、 13 、 18 、 23 、 \_\_\_ 、 ....

3. Brett is 17 years old now and Dennis will be 3 years old 8 years later. What is the difference between their ages?

Brett berusia 17 tahun sekarang dan Dennis akan berusia 3 tahun, 8 tahun kemudian. Berapa selisih usia mereka?

4. If tomorrow will be Tuesday, which day of the week will 10 days later be?

Jika besok adalah hari Selasa, hari apa dalam seminggu 10 hari kemudian?

5. According to the pattern shown below, what is the English alphabet in the space provided?

D 、 f 、 H 、 j 、 L 、 \_\_\_ 、 ....

Menurut pola di bawah ini, apa abjad bahasa Inggris di tempat yang disediakan?

D 、 f 、 H 、 j 、 L 、 \_\_\_ 、 ....

請將答案寫在 答題紙 上。

All answers should be written on the ANSWER SHEET.

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Arithmetic

6. If  $B$  is a 1-digit number, what is the value of  $B$  if the equation below is correct?  
Jika  $B$  adalah bilangan 1 angka, berapa nilai  $B$  jika persamaan di bawah ini benar?

$$\begin{array}{r} 3 \quad 9 \\ - \quad \boxed{B} \\ \hline 3 \quad 2 \end{array}$$

7. Find the value of  $31 - 7 + 18$ .  
Temukan nilai dari  $31 - 7 + 18$ .
8. Find the value of  $5 + 5 + 5 + 5 + 5 - 7 - 7 - 7$ .  
Temukan nilai dari  $5 + 5 + 5 + 5 + 5 - 7 - 7 - 7$ .
9. If  $A$  represents the same 1-digit number, what is the value of  $A$  if the equation is correct?  
Jika  $A$  mewakili angka 1 digit yang sama, berapa nilai  $A$  jika persamaannya benar?

$$\begin{array}{r} A \quad 7 \\ + \quad 2 \quad A \\ \hline 8 \quad 2 \end{array}$$

Question 9

10. Find the value of  $27 + 42 + 13 + 25 + 8 + 15$ .  
Temukan nilai dari  $27 + 42 + 13 + 25 + 8 + 15$ .

請將答案寫在 答題紙 上。

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Number Theory

11. Fill the lines with ‘+’ and ‘-’ to make the equation below correct. (Write down the complete equation on the answer sheet)

$$8 \quad \underline{\quad} \quad 17 \quad \underline{\quad} \quad 9 \quad \underline{\quad} \quad 3 = 19$$

Isi garis dengan ‘+’ dan ‘-’ untuk membuat persamaan di bawah ini benar. (Tuliskan persamaan lengkap pada lembar jawaban)

$$8 \quad \underline{\quad} \quad 17 \quad \underline{\quad} \quad 9 \quad \underline{\quad} \quad 3 = 19$$

12. Fergus has 21 hats and Jeff has 5 hats. How many hat(s) does Fergus have to give Jeff to make them to have the same number of hats?

Fergus memiliki 21 topi dan Jeff memiliki 5 topi. Berapa banyak topi yang harus diberikan Fergus kepada Jeff agar mereka memiliki jumlah topi yang sama?

13. The numbers below follow the arithmetic sequence, what is the 14<sup>th</sup> number?

$$109, 105, 101, 97, 93, \dots$$

Bilangan di bawah ini mengikuti barisan aritmatika, berapakah bilangan ke-14?

$$109, 105, 101, 97, 93, \dots$$

14. By observing the numbers, which odd number is the greatest?

$$88 - 21, 88 + 2, 88 + 13, 88 - 24, 88 + 35, 88 + 36$$

Dengan mengamati bilangan, bilangan ganjil manakah yang terbesar?

$$88 - 21, 88 + 2, 88 + 13, 88 - 24, 88 + 35, 88 + 36$$

15. A large package contains 9 pencils. A small package contains 5 pencils. Buying both large package and small package will attach 1 extra pencil every time. If Peggy buys 3 large and 6 small packages, how many pencil(s) does she have?

Satu paket besar berisi 9 pensil. Paket kecil berisi 5 pensil. Membeli paket besar dan paket kecil akan menambahkan 1 pensil ekstra setiap kali. Jika Peggy membeli 3 paket besar dan 6 paket kecil, berapa banyak pensil yang dia miliki?

請以最簡形式填寫答案，若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。錯誤單位將不給予任何分數。

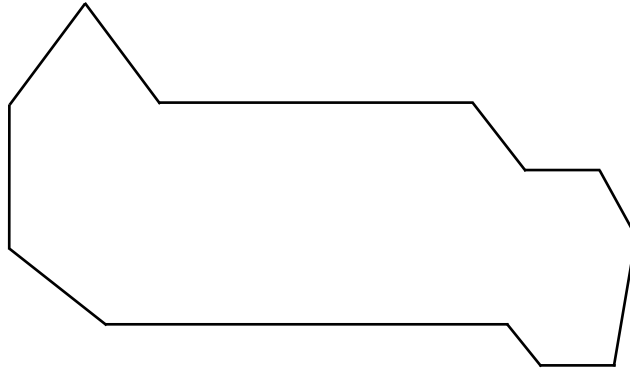
Write down the answer in the simplest form. If the calculation result is a fraction, please write down the answer as a proper or mixed fraction, decimal figure is also accepted. Marks will NOT be given for incorrect unit.

請將答案寫在 答題紙 上。

All answers should be written on the ANSWER SHEET.

Geometry

16. How many side(s) is / are there in the polygon below?  
Berapa banyak sisi / yang ada di poligon di bawah ini?



Question 16

17. According to the pattern shown below, what is the figure in the space provided?

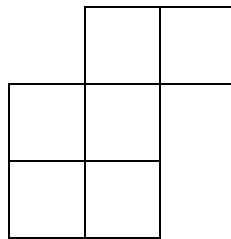


Question 17

Menurut pola yang ditunjukkan di bawah ini, berapakah gambar di tempat yang disediakan?



18. How many square(s) is / are there in the figure below?  
Berapa banyak persegi / yang ada pada gambar di bawah ini?



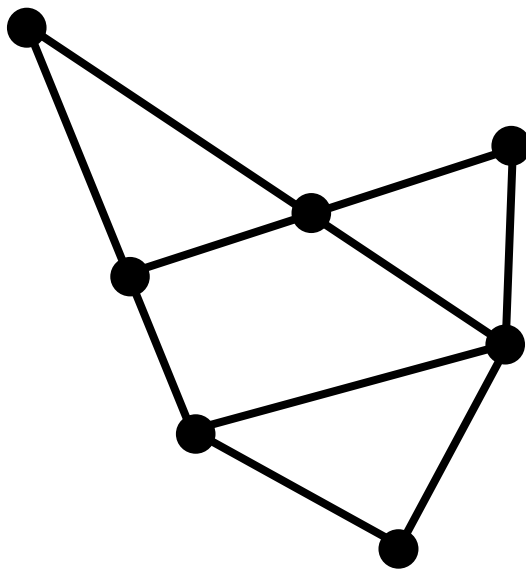
Question 18

請將答案寫在 **答題紙** 上。

All answers should be written on the ANSWER SHEET.

19. Refer to the figure below, how many line segment(s) is / are there?

Perhatikan gambar di bawah ini, ada berapa ruas garis ada?



Question 19

20. It is known that figure 1 is formed by 5 cubes. How many cubes are there in figure 2?

Diketahui gambar 1 dibentuk oleh 5 buah kubus. Berapa jumlah kubus pada gambar 2?

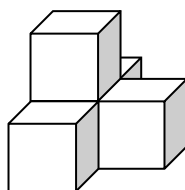


Figure 1

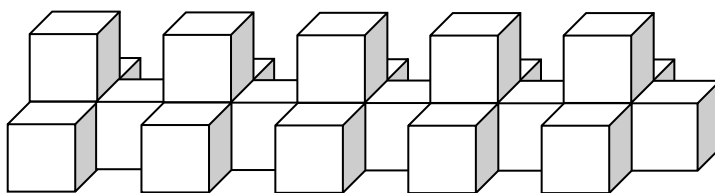


Figure 2

Question 20

請以最簡形式填寫答案，若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。錯誤單位將不給予任何分數。  
Write down the answer in the simplest form. If the calculation result is a fraction, please write down the answer as a proper or mixed fraction, decimal figure is also accepted. Marks will NOT be given for incorrect unit.

請將答案寫在 

答題紙
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 上。

All answers should be written on the ANSWER SHEET.

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Combinatorics

21. According to the values of the following expressions, how many number(s) is / are between 15 and 25?  
 $6+7$ ,  $25-6$ ,  $15+8$ ,  $6+26$ ,  $43-23$ ,  $19-11$ ,  $9+8$

Menurut nilai-nilai dari ekspresi berikut, berapa banyak bilangan berada di antara 15 dan 25?

$$6+7, 25-6, 15+8, 6+26, 43-23, 19-11, 9+8$$

22. Neo has 4 \$1 and 7 \$2 coins. At most how many \$5 coin(s) can he exchange?

Neo memiliki 4 koin \$1 dan 7 koin \$2. Paling banyak, berapa banyak koin \$5 yang dapat dia tukarkan?

23. Choose 4 digits, without repetition, from 0, 4, 6, 7, 8 and 9 to form two 2-digit even numbers and add them up. What is the maximum value of the sum?

Pilih 4 angka, tanpa pengulangan, dari 0, 4, 6, 7, 8 dan 9 untuk membentuk dua angka genap 2 angka dan dijumlahkan. Berapakah nilai maksimum dari penjumlahan tersebut?

24. According to the values of the following expressions, how many 1-digit number(s) is / are there?

$$9+5, 15+6, 35-28, 82-16, 3+7, 4+5, 39-27$$

Menurut nilai dari ekspresi berikut, ada berapa / ada 1 angka?

$$9+5, 15+6, 35-28, 82-16, 3+7, 4+5, 39-27$$

25. Which number below is the largest?

$$2025452 \text{ 、 } 212027 \text{ 、 } 20212121 \text{ 、 } 2024231$$

Angka manakah di bawah ini yang terbesar?

$$2025452 \text{ 、 } 212027 \text{ 、 } 20212121 \text{ 、 } 2024231$$

~ 全卷完 ~

~ End of Paper ~

請以最簡形式填寫答案。若計算結果是分數，請確保為真分數或帶分數，或將計算結果寫成小數。錯誤單位將不給予任何分數。

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